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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,470	01/06/2004	Yusuke Ishihara	Q79189	2344

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WASHINGTON, DC 20037

EXAMINER

HAUGLAND, SCOTT J

ART UNIT	PAPER NUMBER
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3654

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/751,470

Applicant(s)

ISHIHARA ET AL.

Examiner

Scott Haugland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006 and 28 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/30/06 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita (European Patent Application No. 0 926 675) in view of Del Genio et al (U.S. Pat. No. 6,034,850) and the admitted prior art of Fig. 7A and page 17, line 18 through page 18, line 17 of the specification.

Morita discloses a magnetic tape cartridge comprising a cartridge case formed by fastening upper and lower cases together and having a tape leader opening, a single

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tape reel holding magnetic tape, a tape leader pin detachably held in an upright state between the upper and lower cases. The tape leader pin has axially opposite flanges.

Morita does not disclose that the upper and lower cases are made of synthetic resin, that the tape leader pin is 18.7 mm long, or that the thickness of the cartridge case thickness is 1.38 mm above and below the flanges of the tape leader pin. Morita does not disclose that the flanges are 1.1 mm thick as recited in claim 7.

Del Genio et al teaches forming cartridge cases of synthetic resin.

The admitted prior art teaches providing a tape cartridge with magnetic tape having a width of 14 mm and a leader pin having a length of 19.46 mm.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the upper and lower cases of Morita of synthetic resin as taught by Del Genio et al to form an inexpensive, non-magnetic housing for the magnetic tape.

It would have been a matter of obvious engineering choice to make the leader pin 18.7 mm long and to make the cartridge case 1.38 mm thick above and below the flanges of the tape leader pin since it would have been a routine process well within the level of skill of an ordinary artisan to determine a suitable leader pin length and cartridge wall thickness to provide the desired overall dimensions of the cartridge and sufficient cartridge strength, an 18.7 mm long leader pin being adequately long to accommodate conventional 14 mm wide tape.

With regard to claim 7, it would have been a matter of obvious engineering choice to make the flanges 1.1 mm thick. Due to the predictability of the effects of

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various changes in the dimensions of tape cartridges and leader pin, it would have been clear to an ordinary artisan that an operable tape cartridge having a leader pin and cartridge case with the claimed dimensions could be constructed and would be useful for recording and reproducing data. No new and unexpected results are seen to have resulted from selection of a length of 18.7 mm for the leader pin, 1.1 mm for the flange thickness, or 1.38 mm for the cartridge case thickness.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morita in view of Del Genio et al and the admitted prior art as applied to claim 1 above, and further in view of Saito (U.S. Pat. No. 4,290,567).

Morita does not disclose engagement recesses in top and bottom edges of the mounting portion of the leader pin holding spring.

Saito teaches providing a spring with engagement recesses 135', 135" in top and bottom edges of a rectangular mounting portion to secure the spring when mounted in a cartridge case.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the leader pin holding spring of Morita with engagement recesses in the top and bottom edges of the mounting portion of the spring as taught by Saito to prevent shifting of the spring along its length when mounted in the cartridge.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morita in view of Del Genio et al and the admitted prior art as applied to claim 1 above, and further in view of Ishihara et al (U.S. Pat. No. 6,663,036).

Morita does not disclose engagement recesses in top and bottom edges of the mounting portion of the leader pin holding spring.

Ishihara et al teaches providing a spring with engagement recesses 9d in top and bottom edges of a rectangular mounting portion to secure the spring in the proper position when assembling the cartridge.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the leader pin holding spring of Morita with engagement recesses in the top and bottom edges of the mounting portion of the spring as taught by Ishihara et al to secure the spring in the proper position when assembling the cartridge.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morita in view of Del Genio et al and the admitted prior art as applied to claim 1 above, and further in view of Martin et al (U.S. Pat. No. 5,868,338).

Morita does not disclose U-shaped clips for fastening the upper and lower cases together.

Martin et al teaches connecting upper and lower cases of a cartridge together using U-shaped clips 112 (Fig. 2) or 118 (Fig. 8) located near a tape leader opening.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Morita with a U-shaped clip near a tape leader opening

for connecting the upper and lower cases as taught by Martin et al to facilitate assembly of the cartridge.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita (European Patent Application No. 0 926 675) in view of Tanaka et al (U.S. Pat. No. 5,180,118).

Morita is described above.

Morita does not disclose that the upper and lower cases are made of synthetic resin or that there is a metal reinforcing member embedded in one of the cases.

Tanaka et al teaches forming a tape cartridge case by fastening upper and lower cases 1 (Figs. 6-8) of a main body 10 of synthetic resin (col. 7, lines 44-45) together. Tanaka et al teaches providing the tape cartridge case with embedded reinforcement members 2, 4, 26, 28 forming an outermost surface of the cartridge case that provide the cartridge case with rigidity and have a low coefficient of friction (col. 7, lines 37-54).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the upper and lower cases of Morita of synthetic resin and provide it with embedded reinforcement members forming an outer surface of the cases as taught by Tanaka et al to provide a cartridge having high rigidity and having low friction surfaces for contact with tape recording devices. It would have been further obvious to make the reinforcement members of metal since an ordinary artisan would have known that metals would provide the disclosed properties of high rigidity and low

friction coefficient and since the hatching of the reinforcement members 2, 4 in Figs. 6-8 of Tanaka et al indicates a metal.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morita in view of Tanaka et al as applied to claim 4 above, and further in view of Martin et al (U.S. Pat. No. 5,868,338).

Morita does not disclose U-shaped clips for fastening the upper and lower cases together.

Martin et al teaches connecting upper and lower cases of a cartridge together using U-shaped clips 112 (Fig. 2) or 118 (Fig. 8) located near a tape leader opening.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Morita with a U-shaped clip near a tape leader opening for connecting the upper and lower cases as taught by Martin et al to facilitate assembly of the cartridge.

Response to Arguments

Applicants' arguments filed 3/30/06 have been fully considered but they are not persuasive.

Applicants argue that none of Morita, Del Genio, or the admitted prior art teach a tape leader pin 18.7 mm long and a cartridge case thickness of 1.38 mm. However, the choice of these dimensions would have been a routine matter to an ordinary artisan given standard tape width and cartridge height. An ordinary artisan would have been

capable of predicting and evaluating the effects of changes in these dimensions on the finished cartridge in conjunction with the materials from which cartridge is made. No new and unexpected results have been shown to particular dimensions claimed. Specifically, it would have been known to an ordinary artisan that thickening of the walls of the cartridge would increase their strength for any given material and that reducing the thickness of the leader pin flanges would reduce their strength. The artisan would have been capable of balancing these considerations and selecting the appropriate materials to make an operable cartridge.

Applicants argue that Morita, Del Genio, or the admitted prior art fail to teach the leader pin holding spring having engagement recesses in top and bottom edges recited in claim 2. However, Saito and Ishihara et al suggest the provision of engagement recesses in springs that are to be mounted in tape cartridge cases to provide positive positioning and securement of the springs in the cases.

Applicants further argue that projection inserts 112, 118 in Martin do not have a connecting plate portion and a pair of leg portions bent at right angles as recited in claim 3. However, 118, for example, of Martin has a connecting plate portion (narrow portion connecting two larger portions in Fig. 8) and leg portions at each end of the connecting plate portion bent at right angles to the connecting plate portion and extending in the same direction. In Fig. 8, for example, there are two pairs of such leg portions in elements 118, one pair extending upwardly from the connecting plate portion and one pair extending downwardly from the connecting plate portion.


Applicants argue that Tanaka does not teach any reinforcement member provided near an opening of a tape cartridge where tape is exposed. However, the portions 22, 24 of the reinforcement members 2, 4 are near openings of the cartridge where tape is exposed. See Figs. 3 and 5. Providing the cartridge of Morita with such reinforcement members would result in reinforcement members near the tape leader opening and above and below the tape leader pin.

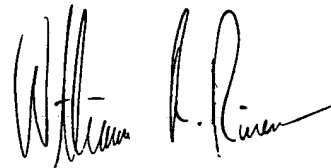
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Haugland whose telephone number is (571) 272-6945. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


sjh
5/25/06



**WILLIAM A. RIVERA
PRIMARY EXAMINER**